

ABSTRACT

A system and method for ensuring that packets are not switched out of order in a network switch capable of dynamically selecting different routing techniques. The network switch may include multiple input ports, multiple output ports, and a shared random access memory coupled to the input ports and output ports by data transport logic. The switch may route packets using cut-through routing or early-forwarding. To ensure that packets are not switched out of order, sequence numbers may be assigned to packets as the packets are received at one of the input ports. A different sequence may be used for each output port. The output port may also track sequence numbers by storing the number corresponding to the most recently received packets from each input port. The stored value may be compared with a sequence number assigned to a packet to ensure that they are within one before allowing cut-through routing.